

WE CLAIM:

1. A gas generant composition comprising:
silicone as a fuel;
5 an oxidizer selected from the group consisting of metal and nonmetal
perchlorates; and
a coolant selected from the group consisting of alkali, alkaline earth, and
transitional metal carbonates, bicarbonates, oxalates, and
hydroxides.
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2. The gas generant composition of claim 1 further comprising:
a secondary oxidizer selected from the group consisting of metal and
nonmetal nitrates.
3. The gas generant composition of claim 1 wherein said oxidizer is selected
15 from the group consisting of potassium perchlorate, ammonium
perchlorate, and lithium perchlorate.
4. The gas generant composition of claim 1 wherein said composition
comprises:
20 silicone;
potassium perchlorate; and
strontium carbonate.
5. The gas generant composition of claim 1 wherein said composition
25 comprises:
silicone;
potassium perchlorate; and
strontium oxalate.
- 30 6. The gas generant composition of claim 1 wherein said composition
comprises:

silicone;
potassium perchlorate; and
calcium oxalate.

- 5 7. The gas generant composition of claim 1 wherein said composition comprises:

silicone;
potassium perchlorate; and
calcium carbonate.

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8. The gas generant composition of claim 1 wherein said composition comprises:

silicone;
potassium perchlorate; and
magnesium hydroxide.

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9. The gas generant composition of claim 1 wherein said composition comprises:

silicone;
potassium perchlorate; and
magnesium carbonate.

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10. The gas generant composition of claim 1 wherein said composition comprises:

silicone;
lithium perchlorate; and
a coolant selected from the group consisting of strontium carbonate,
calcium carbonate, strontium oxalate, magnesium carbonate,
magnesium hydroxide, and potassium carbonate.

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11. A gas generant composition comprising:

silicone at 10-25%;

a primary oxidizer selected from the group consisting of metal and nonmetal perchlorates at 30-85%; and

a coolant selected from the group consisting of alkali, alkaline earth, and transitional metal carbonates, oxalates, bicarbonates, and hydroxides at 1-30%, said percentages stated by weight of said gas generant composition.

12. The gas generant composition of claim 11 further comprising:

at least one secondary oxidizer selected from the group consisting of nonmetal, alkali metal, alkaline earth metal, and transitional metal chlorates, nitrates, nitrites, and oxides at 30-50% by weight of said gas generant composition.

13. The gas generant composition of claim 12 wherein said at least one secondary oxidizer is selected from the group consisting of phase stabilized ammonium nitrate, ammonium nitrate, strontium nitrate, and potassium nitrate.

14. A method of inflating an airbag comprising the step of:

combusting a gas generant composition comprising silicone, an oxidizer selected from the group consisting of metal and nonmetal perchlorates, and a coolant selected from the group consisting of metal carbonates, metal oxalates, metal bicarbonates, and metal hydroxides.

15. The method of claim 14 wherein said silicone is provided at 10-25%, said oxidizer at 30-85%, and said coolant at 1-30%, said percentages stated by weight of said gas generant composition.

16. A gas generant composition comprising:

silicone at 10-25%;
potassium perchlorate at 30-85%; and
a coolant selected from the group consisting of alkali metal, alkaline earth
metal, and transitional metal carbonates, oxalates, and hydroxides
at 1-30%, said percentages stated by weight of said gas generant
composition.

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17. The gas generant composition of claim 16 comprising:

silicone at 10-25%;
potassium perchlorate at 30-85%; and
strontium carbonate at 1-30%, said percentages stated by weight of said
gas generant composition.

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18. The gas generant composition of claim 17 comprising:

silicone at 20%;
potassium perchlorate at 60%; and
strontium carbonate at 20%, said percentages stated by weight of said
gas generant composition.

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